IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No: 09/967,307   Examiner: El Hadji Malick Sall

Filing Date: September 28, 2001   Group Art Unit: 2157

Inventor: Brian A. Batke   Confirmation No.: 5198

Title: *Industrial Control System with Autonomous Web Server*

Attorney Docket No. 1506.021

APPELLANTS' REPLY BRIEF

Mail Stop – Appeal Brief - Patent
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

On or about July 31, 2007, Appellant appealed from the Final Rejection of claims 1-22 and submitted Remarks Accompanying Pre-Appeal Brief Request for Review. On May 4, 2007, a Notice of the Panel Decision from Pre-Appeal Brief Review concluded that there was at least one actual issue for appeal. Appellants submitted an Appeal Brief on July 31, 2007. A first Examiner's answer was mailed on November 14, 2007. A second Examiner's answer was mailed on December 13, 2007 apparently correcting citation of a wrong patent number by the Examiner. A third Examiner's answer was mailed on January 24, 2008 including another correction. This Appellants' Reply Brief is submitted in response to the first, second, and third Examiner's answers, which Appellants believe to be substantively similar.

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INTRODUCTION

This Reply Brief is directed only to the elements discussed by the Examiner's Answer, as well as any issues raised in the Appeal Brief that were not adequately addressed by the Examiner's Answer. Generally, the Examiner's Answer appears to be an copy of the Final Office Action and does not address any of the specific arguments presented by Appellants in the Appeal Brief. The Status of Claims and Grounds of Rejection are presented to comply with the requirements of MPEP §1208, but remain unchanged from the Appeal Brief.

STATUS OF CLAIMS

The Examiner has rejected claims 1, 4, 12, 14, and 15 under 35 U.S.C. §103(a) as being unpatentable over Lindner (US 6,640,140) in view of Papadopoulos (US 6,484,061). Claims 7-8, and 18-19 have been rejected over Lindner in view of Papadopoulos (US 6,061,603). Claims 2 and 13 have been rejected over Lindner in view of Katsuhiko (JP 10-011325). Claims 5 and 16 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Lindner in view of Brown (US 6,542,925). Claims 6, 9-11, 17 and 20-22 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Lindner in view of Brown in further view of Papadopoulos (US 6,061,603). Claim 3 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Lindner in view of Hauet (6,799,077).

All of the claims have been finally rejected, and the rejection of claims 1-22 is appealed herein. The claims, as they presently stand, are found in the Claims Appendix to the Appellant's Appeal Brief.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues presented for review are as follows:

I. Whether claims 1 and 12 are patentable under 35 U.S.C. §103(a) over U.S. Patent No. 6,640,140 to Lindner (the Lindner patent) in view of U.S. Patent No. 6,484,061 to Papadopoulos (the Papadopoulos '061 patent). These claims require a direct connection between a Web interface and an I/O module without mediation by the programmable logic controller.

II. Whether claims 2 and 13 are unpatentable under 35 U.S.C. §103(a) as being unpatentable over Lindner in view of Katsuhiko. These claims require a memory locking mechanism to prevent the I/O modules from being changed by spurious Web messages.

III. Whether claims 3 and 14 are unpatentable under 35 U.S.C. §103(a) as being unpatentable over Lindner in view of Hauet or conversely in view of Papadopoulos '061. These claims require "connected messaging" between the Web interface and the I/O modules.

IV. Whether claims 7 and 18 are unpatentable under 35 U.S.C. §103(a) as being unpatentable over Lindner in view of Papadopoulos '603. These claims require an I/O image table in the Web interface used as a vehicle for coordinating asynchronous data transfers between the Web and the I/O modules.

For the purposes of this appeal, claims 1 and 12 stand or fall together, independent from the other claims appealed herein; claims 2 and 13 stand or fall together, independent from the other claims appealed herein; claims 3 and 14 stand or fall together independent of the other claims appealed herein; and claims 7 and 18 stand or fall together independent of the other claims appealed herein. The remaining claims to stand or fall with the claims on which they are dependent.

ARGUMENTS

I.   Rejection of independent claims 1 and 12

The Examiner's Answer fails address Appellants' showing in the Appeal Brief that the

Final Rejection did not make a *prima facie* case for the rejection of independent claims 1 and 12

as being obvious over Lindner in view of Papadopoulos '061 because even in combination, these

references fail to teach express elements of these claims.

The Examiner did not address Appellants' showing that neither Lindner nor

Papadopoulos '06 teaches a "Web interface module" allowing the writing of data to the I/O

modules directly from the Web "without intervention of the programmable logic controller." As

shown in the Appeal Brief, Papadopoulos '061 describes the Web server 30 communicating

directly only with the PLC 32 and provides no suggestion that there can be communication

between the Web server 30 and the I/O modules 40 that does not pass through the PLC.

The Examiner resubmitted the argument that Papadopoulos '061 teaches communication

between the Web server and the I/O modules without the intervention of the PLC because the

Web server and the I/O modules are connected by a backplane. However, the Examiner did not

address Appellants' showing that an inherency argument that these item communicate directly

without intervention merely because they are connected is incorrect as a technical matter. The

Examiner did not overcome the showing that the Web server and I/O modules of Papadopoulos

'061 do not communicate directly with each other without intervention but, as clearly indicated

by Papadopoulos '061, communicate through the PLC.

The Examiner also did not address the showing that Papadopoulos '061 fails to recognize

or teach any way to manage the risk of malicious Web traffic wreaking havoc on controlled

equipment or processes or the problem of conflicts between control from the Web and control

from the PLC. As previously shown, the failure of Papadopoulos to address this issue supports

the contention that Papadopoulos did not contemplate such a direct connection and that the

possibility of such a direct connection was not obvious to Papadopoulos or those of skill in the

art at this time.

II.   Rejection of dependent claims 2 and 13

The Examiner did not address Appellants' showing that col. 4 of the Lindner reference

does not appear to show a write disable command as suggested by the Examiner nor that the

Katsuhiko patent does not remedy the deficiencies in Lindner.

The Examiner also did not address Appellants' showing that Katsuhiko discloses a

generic write disable command which does not teach or suggest "a write disable command from

the programmable logic controller causing the stored program to allow direct reading of data

from the I/O module but not direct writing of data to the I/O module" as recited in the claims of

the present application.

The Examiner also did not address Appellants' showing that the Examiner's expressed

motivation teaches away from the present invention.

III.   Rejection of dependent claims 3 and 14

The Examiner did not address Appellants' showing that Lindner fundamentally fails to

teach a Web interface module that may control I/O modules through the controller networking

even when the PLC is not operational nor teach or suggest the use of a connected messaging

protocol with the web interface of Lindner. The Examiner also did not address Appellants'

showing that this deficiency is not remedied by Hauet which fails to teach connected messaging

or any of the standards that would provide for connected messaging.
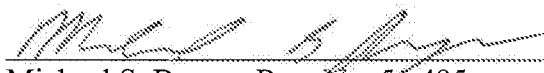
IV.   <u>Rejection of dependent claims 7 and 18</u>

The Examiner did not address Appellants' showing that the "read/write" data at column

8, Table 1 of Papadopoulos is not data from the I/O modules directly but rather data from the

PLC and that this suggests that Papadopoulos, if anything, teaches the use of an I/O table for

communication with the PLC and a Web server, although that probably overstates what

Papadopoulos teaches.

CONCLUSION

The combination of references relied upon does not fairly teach the limitations of claims

1, 2, 3, 7, 12, 13, 14, 18 or any of the claims dependant on these claims. The Examiner's Answer

does not overcome or address any of the showings submitted in the Appeal Brief. Therefore, the

Applicant requests that the Board overturn the Examiner's rejection of these claims and pass

claims 1-22 to allowance.

Respectfully Submitted,

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